

CA 28

COMPARATIVE EVALUATION OF SEVERAL ACTIVATED CARBONS.
K. Smolewski and W. Zera. *Gas. Chymiczne* 72, 205-22, 260-63(1933).--The following activated carbons are tested: Norit Standard (I), Norit Superke (II), Carborafin (III), Sumacarb Super Grade (IV), Hlagenit, normal (V), Hlagenit, special (VI), Carbomel, (VII) and Horodenka (VIII). I, II and III are German, IV English, V and VI Austrian, VII a Polish charcoal prep'd. from molasses, and VIII another Polish product. The results are tabulated below:

	I.	II.	III.	IV.	V.	VI.	VII.	VIII.
Moisture (air-dry)	18.50	11.91	13.46	23.05	16.13	15.38	7.30	5.80
Total ash (oven-dry)	7.42	4.31	3.15	10.85	6.87	1.22	4.78	14.07
H ₂ O sol. ash	1.65	0.34	0.81	3.51	2.06	0.41	2.02	2.86
H ₂ O sol. substance	1.34	0.82	0.50	1.37	3.01	0.38	1.20	2.00
pH of H ₂ O extract (H ₂ O = 8.4)	8.6	6.1	6.1	6.2	9.4	8.4	7.4	6.1

Charcoals of the carborafin type have a pronounced ability for adsorbing cations from soles., while those of the Norit type adsorb only calcium ions. These carbons may be divided into 3 groups: (1) those with the highest adsorption ability and the lowest filtering rate, i. e., III and IV, (2) those of a medium adsorption capacity and filtering rate, i. e., VII, VIII, VI, and (3) those of a low adsorption capacity and a high filtering rate, i. e., II, I and V.

J. Wiertelak

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

BC a-1

PROCESS AND PROPERTIES INDEX

Solubility of calcium oxide in water and in aqueous sucrose. K. Szotek and W. Zeno (Rocz. Chem., 1936, 16, 24-36, and Bull. Acad. Polonaise, 1935, A, 586-601).—The solubility of CaO in H₂O and 1-5-36% sucrose (I), at 0-80°, rises with (I) concn. and falls with rising temp. The final p_{∞} is the same in presence or absence of (I). R. T.

ASB-5LA METALLURGICAL LITERATURE CLASSIFICATION

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TEST AND 2ND ORDER																										TEST AND 2ND ORDER																									
<p><i>ca</i></p> <p>Filtration in the sugar industry. Wladyslaw Zero. <i>Gos. Cukroveniki</i> 83, 3-23(1038). The stages of filtration are described and formulas to explain the current practice are given. Increasing the Ca content (to a certain limit) reduces the org. nonsugar compds. (pectinic substances) in the mud. The ideal filtering temp. is 92-93°. The kind of beet has only a small effect on the speed of filtration. A low pressure in the thin-framed and a high pressure in the thick-framed presses give the best results.</p> <p>High temp. has a greater destructive effect on the filter cloths than has the alk. of the soln. The fabric tends to harden when CO₂ is present, owing to the formation of CaCO₃. In 43 plants during 1936-7, 1000 quintals of beets required from 3.28 to 17.23 (with a mean of 6.27) sq. m. of cloth. Hemp filter cloths with a mean serviceability of 22 days were superior to jute cloths. The presence of small amounts of mud in the first satn. juices has little effect on the second satn. The use of celite and activated charcoal gives better filtration. Sixty-three references.</p> <p>Frank Gonet</p>																																																			
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ZEROMAKI S.

Szyfowe prace (Sisyphus works), by S. Zeromaki. Reported in New Books
(Nowe Ksiazki), No. 4, February 15, 1956.

POLAND

SEGAL, Pawel, KIKIELA, Marian, MRZYGLOD, Stanislaw, and ZBRONSKA-ZBIERSKA, Isabela; Clinic of Eye Diseases (Klinika Chorob Oczu) WAM [Wojkowa Akademia Medyczna, Military Medical Academy] in Lodz (Director: Prof. Dr. med. P. SEGAL) and Eye Division (Oddzial Oczny), Military Hospital (Szpital Wojakowy) in Zielona Gora (Ordynator: Dr. M. KIKIELA)

"On the Coexistence of the Familiar Form of Pigmentary Degeneration of the Retina with Kartagener Triade. Case Report."

Warsaw, Polski Tygodnik Lekarski, Vol 18, No 23, 3 Jun 63, pp 809-812.

Abstract: [Authors' English summary modified] Authors report a case of Kartagener triade, pigmentary degeneration of the retina, and congenital cataract. They review briefly the literature of this problem, and note that the changes observed in this syndrome are always due to developmental difficulty or degenerative changes, and may therefore have common pathological elements with the classical symptoms of the Kartagener triade. There are 21 references, about evenly divided between Polish, German, and Western publications.

1/1

GAWRONSKI, Mieczyslaw; ZEROMSKI, Jan

Marginal metastatic pulmonary calcification in cases of leukemia and multiple myeloma. Pat. Pol. 15 no.3:361-368 J1-S '64.

1. Z Zakladu Anatomii Patologicznej Akademii Medycznej w Poznaniu (Kierownik: prof. dr. med. Janusz Groniowski).

WIERZCHOWIECKI, Michał; ZEROMSKI, Jan

Antiglobulin consumption and immunofluorescence tests in the diagnosis of systemic lupus erythematosus. Pol. arch. med. wewnet. 35 no.7:1019-1024 '65.

1. Z I Kliniki Chorob Wewnętrznych AM w Poznaniu (Kierownik: doc. dr. med. K. Jasinski) i z Zakładu Anatomii Patologicznej AM w Poznaniu (Kierownik: doc. dr. med. P. Gabryel).

ZEROMSKI, S.

An author, a compatriot; an article published in the magazine Naceln Swiat
in 1925.

(MERZE) Vol. 11. No. 12, December 1957

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7. No. 5. 1958

ZEROMSKI, S.

"Central Register of Chemical Literature in the Documentation Center of the Institute of Inorganic Chemistry in Gliwice." P. 43. "Technical-Scientific Conference of the Polish Academy of Sciences Concerning the Chemical Treatment of Coal." P. 44, (PRZEMYSŁ CHEMICZNY, Vol. 10, No. 1, Jan. 1954, Warszawa, Poland)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 1, Jan. 1955 Uncl.

1ST AND 2ND CROSS																										3RD AND 4TH CROSS																									
COMMON ELEMENTS																										COMMON VARIANTS																									
<p>System calcium sulfate-lime-sulfur trioxide. S. Zeromski and Z. Stulicki. Roczniki Chem. 14, 849-50 (1934). The pressure-percentage decompn. curves of CaSO_4 heated above 1000° exhibit irregularities and spurious equil. points; these effects are ascribed to formation of metastable solid solns. of the products of decompn. and to surface phenomena. The system is univariant. B. C. A.</p>																										<p>PROCESSES AND PROPERTIES INDEX</p>																									
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<p><i>cs</i></p> <p style="text-align: right;"><i>2</i></p> <p>Application of x-rays to study of the systems As₂S₃ - As₂S₃ + Cu₂S. S. Zeroni and W. Szamborska. <i>Russkii Khim. 18, 824-8 (in French, 829) (1938).</i>—X-ray analysis was used for examining thermal decompos. of ZnCO₃ and CdCO₃. By this method one can judge what quantity of gas is still combined in the substance and what adsorbed by the solid phase. The results are discussed. M. Wojciechowski</p>																			
ASM-A6A METALLURGICAL LITERATURE CLASSIFICATION																			
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COMMON ELEMENTS										PROCESSES AND PROPERTIES INDEX										100 AND 4TH INDEX									
<p><i>BC</i></p> <p><i>System CaSO-CaO-EO. S. L. KROGMARK and Z. SAVITSKY (Roc. Chem. 1954, 24, 848-856). The pressure vs. decomp. curve of CaSO₂ heated at > 1000° exhibits irregularities and aperiodic equilibrium points; these effects are ascribed to formation of metastable solid solutions of the products of decomp. and to surface phenomena. The system is univariant. R. T.</i></p>																													
<p>ASTM-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																													
1ST AND 2ND INDEX										3RD AND 4TH INDEX										5TH AND 6TH INDEX									
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BC

PROCESSING AND PROPERTIES INDEX

2-1

Application of X-radiography to study of the systems $A_{solid} = B_{solid} + C_{gas}$. H. ZEROMSKI and W. SZAMBORSKA (Rocz. Chem., 1938, 13, 924-929).—The X-ray diagrams of $ZnCO_3$ and $CaCO_3$ subjected to thermal dissociation suggest occlusion of, but not combination with, part of the evolved CO_2 . Considerable deformation of the space lattice is found for products of low-temp. dissociation.

R. T.

ASM. S. A. METALLURGICAL LITERATURE CLASSIFICATION

CA

18

Progress in the manufacture of sulfuric acid in recent years. III. ST. ZAKRUMSKI.
Przemysl Chem. 13, 514-21(1920); cf. C. A. 23, 3044.—Purification, concn., pumping
 of H_2SO_4 , obtaining pure acid and contact oxidation of SO_2 are described. A. C. Z.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

COMMON ELEMENTS

OPEN

MATERIALS INDEX

GROUPS

SECONDARY GROUPS

THIRDARY GROUPS

FOURTHARY GROUPS

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SIXTEENTHARY GROUPS

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SEVENTEENTHARY GROUPS

EIGHTEENTHARY GROUPS

NINETEENTHARY GROUPS

TWENTY-THIRDFARY GROUPS

ZEROMSKI, Z.

USSR / Chemical Technology. Chemical Products and Their Application. Food Industry.

Ref Zhur - Khimiya, No 3, 1957, No 10397

Author : Zeromski, Z.
Inst : Not given
Title : An Evaluation of Polish Cheeses

Orig Pub : Przegl. mleczarski, 1956, Vol 4, No 5, 19-23

Abstract : A commission of specialists has evaluated 147 specimens of various types of cheeses of Polish manufacture submitted by 131 plants; 28% of the samples were classed in class I, 46% in class II, and 21% in class III; 5% of the samples were returned for further processing. It has been established that the dominant defects fell into the following categories: sub-standard taste and odor, molds, structure, consistency, color, appearance, and defective

Card : 1/2

USSR / Chemical Technology. Chemical Products and Their Application. Food Industry.

I-30

Abs Jour : Ref Zhur - Khimiya, No 3, 1957, No 10397

Abstract : paraffin coating. The commission found that 91.9% of the samples submitted met the State Standard on salt content and that 47% of the samples showed deviations from the State Standard on fat content; high moisture was observed in 48.95% of the samples.

Card : 2/2

ZEROMSKI, Z.

4026
Zeromski Z. Preliminary Investigations over Early Paraffin Covering
of Tilted Cheese.

637.33.004.5

„Wstępne oświadczenia nad wczesnym parafinowaniem sera (ti-
zycznego) (Prace Inst. Przem. Mlecz.)

MD

Summary: Tilted cheese was prepared

POLAND / Chemical Technology. Food Industry.

H-28

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 79464.

Author : Zeromski, Z.

Inst : ~~Not given.~~

Title : The IV-th Evaluation of Cheese Quality in PNR
/Polish People's Republic/.

Orig Pub: Przegl. mleczarski, 1957, 5, No 11, 10-12.

Abstract: These are the results on the evaluation of the quality of cheeses produced in PNR. The evaluation was conducted by the In-ut and Central Administration of Dairy Industry.

Card 1/1

ZERÓV, D. K., ED.

Ukraine - Botany

"Flora of the URSR" vol. 3. Reviewed by F.O. Gryn'. Visnyk AN URSR 22,
No. 10, 1950.

Monthly List of Russian Accessions, Library of Congress
August 1952. UNCLASSIFIED.

1. ZEROV, D. K.
2. USSR 600
4. Pollen, Fossil
7. "Analysis of fossils of pollen and spores and its application in paleogeography."
V. P. Grichuk, YE. D. Zaklinskaya, "Jurassic chalk as a guide to spores and
pollen." V. S. Malyavkina." Pollen analysis" I. M. Polrovskaya. Reviewed by
D. K. Zerov, Bot. zhur (Ukr) 8, No. 1, 1951.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

ZEROV, D.K.

Discovery of the Mediterranean Sea liverwort (*Oxymitra paleacea* Bisch.) in the vicinity of Kanev. Bot.zhur.[Ukr.] 8 no.3:80-81 '51. (MIRA 6:9)
(Kanov, Ukraine--Hepaticae) (Hepaticae--Kanov, Ukraine)

KURSANOV, L.I., redaktor; ZEROV, D.K. [reviewer].

"Botany," vol. 2: Classification of plants. L.I.Kursanov, ed. Reviewed by
D.K.Zerov. Bot.zhur.[Ukr.] 9 no.3:95-97 '52. (MLRA 6:11)
(Botany--Classification)

ZEROV, D.K.

Three new species of liverworts in the flora of the U.S.S.R. from Maritime Territory. Bot.zhur.[Ukr.] 10 no.1:101-105 '53. (MIRA 6:8)
(Maritime territory--Hepaticae) (Hepaticae--Maritime territory)

ZEROV, D.K.

Genus *Jubula* Dum. in the flora of the U.S.S.R. Bot.zhur. [Ukr.] 10 no.3:
85-90 '53. (MLRA 6:8)

1. Instytut botaniky Akademiyi nauk Ukrayins'koyi RSR, viddil sporovykh
roslyn. (*Jubula*)

21-100, 2-1-
ZEROV, D.K., redaktor; KOFOV, M.I., professor, doktor biologichnikh nauk;
KLOKOV, M.V., professor, doktor biologichnikh nauk; VISYULINA, O.D.
kandidat biologichnikh nauk; BARBARICH, A.I., kandidat biologichnikh
nauk; KRILOVSKAYA, N.S., tekhredaktor

Rose family. A.I. Barbarich and others. Flora URSR no. 6:5-300 '54.
(MIRA 8:11)

1. Diysniy chlen Akademii nauk URSR (for Zerov)
(Ukraine--Roses)

Zerov, D.K.
ZEROV, D.K., redaktor; KOTOV, M.I., professor, doktor biologichnikh nauk;
KLOKOV, M.V., professor, doktor biologichnikh nauk; VISYULINA, O.D.
kandidat biologichnikh nauk; BARBARICH, A.I., kandidat biologichnikh
nauk; KRILOVSKAYA, N.S., tekhredaktor

Legume family. A.I. Barbarich and others. Flora URSS no. 6: 301-573
'54. (MLRA 8:11)

1. Diysniy chlen Akademii nauk URSS (for Zerov)
(Ukraine--Leguminosae)

ZEROV, D.K.

Afrykan Mykolaiovych Kryshtofovych. Bot.zhur.[Ukr.] 11 no.2:92-97 '54.
(Kryshtofovych, Afrykan Mykolaiovych, 1885-1953) (MLRA 8:7)

ZEROV, D.K.

Porella ulophylla (Steph.) D. Zerov comb.nova in the U.S.S.R. flora.
Bot.shur.[Ukr.] 11 no.4:70-72 '54. (MLRA 8:7)

1. Institut botaniki AN URSR, viddil sporovikh roslin.
(Hepaticae)

LAZARENKO, Andrey Sozontovich; SHILO, V.N., redaktor; ZEROV, D.K., redaktor;
SIVACHENKO, Ye.K., tekhnicheskiy redaktor

[Guide to the mosses (Musci) of the Ukraine] Opre delitel' listvennykh
mkhov Ukrainy. Izd. 2-oe, perer. i dop. Kiev, Izd-vo Akademii nauk
Ukrainskoi SSR 1955. 465 p. (MLHA 9:2)

1. Deystvitel'nyy chlen AN USSR (for Zerov)
(Ukraine--Mosses)

ZEROV, D.K.

Basic trends in the development of the vegetable kingdom. Bot.
zhur.[Ukr.] 12 no.2:3-16 '55. (MIRA 8:10)

1. Institut botaniki Akademii nauk URSS
(Phylogeny (Botany))

ZEROV, D.K.

Distribution of xerothermophilic liverworts in the Ukrainian S.S.R.
Bot. zhur. [Ukr.] 12 no. 3: 91-96 '55. (MLRA 8:11)
(Ukraine--Hepaticae)

MODILEVSKIY, Yakov Samuilovich; ZEROV, D. K., akademik, otvetstvennyy redaktor;
GRUDZINSKAYA, O.S., redaktor izdatel'stva; ROKHLINA, N.P.,
tekhnicheskiy redaktor

[The history of Russian embryology of higher plants] Istorii
otechestvennoi embriologii vysshikh rastenii. Kiev, Izd-vo
Akademii nauk USSR, 1956. 201 p. (MIRA 9:11)

1. Akademiya nauk USSR (for Zerop)
(Botany--Embryology)

KHOLODNIY, Nikolay Grigor'yevich; BELOKON', I.P.; redaktor; ZEROV, D.K.,
redaktor; OKANENKO, A.S., redaktor; POGREBENYAK, P.S., redaktor;
HUBENCHIK, L.I., redaktor; SHILO, V.N., redaktor izdatel'stva;
SIVACHENKO, Ye.K., tekhnicheskii redaktor

[Selected works; in three volumes] Izbrannye trudy; v trekh tomakh.
Kiev, Izd-vo Akademii nauk USSR. Vol.2. [Works on the physiology
of plants] Raboty po fiziologii rastenii. 1956. 388 p. (MLRA 9:11)
(Botany--Physiology)

KHOLODNYI, Nikolay Grigor'yevich; BELOKON', I.P., redaktor; ZEROV, D.K., redaktor; OKAMENKO, A.S., redaktor; POGREBANYAK, P.S., redaktor; RUBENCHIK, L.I., redaktor; NEMIROVSKIY, R.M., redaktor; SIVACHENKO, Ye.K., tekhnicheskii redaktor.

[Selected works in three volumes] Izbrannye trudy v trekh tomakh. Kiev, Izd-vo Akademii nauk USSR. Vol.1. [Works on plant physiology] Raboty po fiziologii rastenii. 1956. 478 p. (MLRA 9:6)
(Botany--Physiology)

ZEROV, D.K.; BACHURINA, G.F.

Mosses of steppe preserves of the Academy of Sciences of the
Ukrainian S.S.R. Ukr.bot.zhur.13 no.2:78-84 '56.(MIRA 9:9)

1.Institut botaniki AN URSR, Viddil sporovikh roslin.
(Ukraine--Mosses)

KHOLODNYI, Nikolay Grigor'yevich; BELOKON', I., redaktor; ~~ZEROV, D.K.~~,
redaktor; OKAHENKO, A.S., redaktor; POGREBNYAK, P.S., redaktor;
RUBENCHIK, L.I., redaktor; SHILO, V.N., redaktor izdatel'stva;
SIVACHENKO, Ye.K., tekhnicheskii redaktor

[Selected works; in three volumes] Izbrannye trudy; v trekh tomakh.
Kiev, Izd-vo Akad.nauk USSR. Vol.3 [Works on microbiology and
plant ecology] Raboty po mikrobiologii i ekologii rastenii. 1957.
525 p. (MLA 10:7)

(Microbiology) (Botany--Ecology)

ZEROV, D.K.; SHCHEKINA, N.O.

Development of research on the history of flora and paleobotany
in the Ukrainian S.S.R. during the last 40 years (1917-1957).

Ukr.bot.shur. 14 no.3:36-41 '57.

(MIRA 10:10)

(Ukraine--Botanical research)

(Paleobotany)

BARBARICH, A.I.[Barbarych, A.I.], kand. biol. nauk; BRADIS, Ye.M., doktor biol. nauk; VISYULINA, O.D., doktor biol. nauk; VOLODCHENKO, V.S.; DOBROCHAYEVA, D.M., kand. biol. nauk; KARNAUKH, Ye.D.; KATINA, Z.F., kand. biol. nauk; KOTOV, M.I., doktor biol. nauk; KUZNETSOVA, G.O.[Kuznetsova, H.O.], kand. biol. nauk; OLYANITSKOVA, L.G.[Olianits'ka, L.H.]; OMEL'CHUK, T.Ya., kand. biol. nauk; POYARKOVA, O.M.; PROKUDIN, Yu.M., doktor biol. nauk; PROTOPOPOVA, V.V.; SLYUSARENKO, L.N.; SMOLKO, S.S.; KHRZHANOVSKIY, V.G. [Khrzhanovs'kyi, V.H.], doktor biol. nauk; ZEROV, D.K. akademik, otv. red., ONISHCHENKO, L.I., red.

[Key for the identification of plants in the Ukraine] Vyznachnyk roslyn Ukrainy. Vyd.2., vypr. 1 dop. Kyiv, Urozhai, 1965. 876 p. (MIRA 18:9)

1. Akademiya nauk URSR, Kiev. Instytut botaniky. 2. AN Ukr.SSR (for Zerop). 3. Moskovskaya sel'skokhozyaystvennaya akademiya im. K.A.Timiryazeva (for Khrzhanovskiy).

GRODZINSKIY, Andrey Mikhaylovich; ZEROV, D.K., akademik, otv. red.;
SKUTSKAYA, N.P., red.

[Allelopathy in the life of plants and their communities;
principles of the chemical interaction of plants] Allelo-
patia v zhizni rastenii i ikh soobshchestv; osnovy khimicheskogo vzaimodeistviia rastenii. Kiev, Naukova dumka, 1965. 198 p. (MIRA 18:9)

1. Akademiya nauk Ukr.SSR (for Zerov).

ZEROV, Dmitriy Konstantinovich; OKSNER, A.M., doktor biol. nauk,
otv. red.

[Flora of liverworts and sphagnum mosses] Flora pechinoch-
nykh i sfahnovykh mokhiv Ukrainy. Kyiv, Vyd-vo "Naukova
dumka," 1964. 354 p. (MIRA 17:7)

ZEROV, D. K.

"Problems of the phylogeny of liverworts."

report submitted to 10th Intl Botanical Cong, Edinburgh, 3-12 Aug 64.

AS UkSSR, Kiev.

ZEROV, D.K.

The horsetails *Equisetum majus* Garb. and *Equisetum variegatum*
Schleich. in the environs of Kiev. Ukr. bot. zhur. 20 no.6:
74-80 '63, (MIRA 17:2)

1. Institut botaniki AN UkrSSR.

MODILEVSKIY, Yakov Samuilovich; ZEROV, D.K., akademik, otv. red.;
SOLOV'YEVA, A.I., red.; REKES, M.A., tekhn.red.

[Cytoembryology of higher plants] TSitoembriologiya vys-
shikh rastenii; sovremennoe sostoianie. Problemy. Kiev,
Izd-vo AN USSR, 1963. 370 p. (MIRA 17:2)

1. Akademiya nauk Ukr.SSR (for Zerop).

ZEROV, D.K., akademik, otv. red.; ANDRIICHUK, M.D., red.izd-va;
DAKHNO, Yu.B., tekhn. red.

[Problems of physiology, cytoembryology and flora of the
Ukraine] Pytannia fiziologii, tsytoembriologii i flory
Ukrainy. Kyiv, Vyd -vo AN URSR, 1963. 222 p.
(MIRA 17:2)

1. Akademiya nauk URSR, Kiev. Instytut botaniky. 2. Akademiya
nauk Ukr.SSR (for Zerov).

AFANAS'YEV, D.Ya.; ZEROV, D.K., red.

[Russian-Ukrainian dictionary of botanical terminology
and nomenclature] Russko-ukrainskii slovar' botaniche-
skoi terminologii i nomenklatury. Kyiv, Vyd-vo AN
Ukr.SSR, 1962. 340 p. (MIRA 16:11)
(Botany--Dictionaries)
(Russian language--Dictionaries--Ukrainian)

AFANAS'YEV, D.Ya.; BARBARICH, A.I.[Barbarych, A.I.]; ZEROV, D.K.; akad.;
KLOKOV, M.V.; OKSIYUK, P.F.[deceased]; SHCHITKOVSKAYA,
V.L.[Shchitkivs'ka, V.L.]; BILOSHTAN, A.P., red.-
leksikograf; SKUTSKAYA, N.P.[Skuts'ka, N.P.], red.;
KADASHEVICH, O.O.[Kadashevyoh, O.O.], tekhn. red.

[Russian-Ukrainian dictionary of botanical terminology and
nomenclature] Rosiis'ko-ukrains'kyi slovnyk botanichnoi
terminologii i nomenklatury. Kyiv, Vyd-vo Akad. nauk USRS,
1962. 340 p. (MIRA 16:4)

1. Akademiya nauk Ukr. SSR (for Zerov).
(Botany--Dictionaries)
(Russian language--Dictionaries--Ukrainian)

ZEROV, D.K.

Prospects for the development of research on the flora and vegetation
of the Ukraine in the nearest future. Ukr. bot. zhur. 19 no.3:3-9
'62. (MIRA 15:7)

(Ukraine--Botanical research)

ZEROV, D.K., akademik, otv. red.; BILOKIN', I.P., kand. biol. nauk,
red.; BARBARICH, A.I. [Barbarych, A.I., red.; KONDRATYUK,
Ye.M., red.; SITNIK, K.M. [Sytnyk, K.M.], red.; KOVAL', V.A.,
red.; LISOVETS', O.M. [Lysovets', O.M.], tekhn. red.

[Yearbook of the Ukrainian Botanical Society] Shchorichnyk.
Kyiv, Vyd-vo Akad. nauk URSR. Vol.3. 1962. 130 p.
(MIRA 15:11)

1. Ukrains'ke botanichno tovarystvo. 2. Akademiya nauk
Ukr.SSR (for Zerop).
(Ukraine--Botany--Yearbooks)

ZEROV, D.K.

A species of the genus *Riccia*, *Riccia pseudopapillosa* Levier,
new for the flora of the U.S.S.R. Ukr. bot. zhur. 18 no.3:73-
77 '61. (MIRA 14:12)

1. Institut botaniki AN USSR.
(Liverworts)

ZEROV, D.K.; OKSNER, A.N. [Oksner, A.M.]; TELEGIN, D.Ya. [Telehin, D.IA.]

Prints of barley caryopses found on earthenware fragments from a
neolithic site near the village of Chapayevka, in Kievo-Svyatoshinskiy
District, Kiev Province. Ukr. bot. zhur. 17 no.5:101-102 '60.

(MIRA 13:12)

(Chapayevka region (Kiev Province)--Barley, Fossil)

ZEROV, D.K.; MODILEVSKIY, Ya.S.

In memory of Petr Fedorovich Oskliuk. Ukr. bot. zhur. 17 no.4:89-
92 '60. (MIRA 13:9)

(Oskliuk, Petr Fedorovich; 1896-1960)

ZEROV, D.K.; BILOKIN', I.P. [Bilokin', I.P.]

Il'ia Grigor'evich Borshchov. Ukr.bot.zhur. 16 no.3:87-93
'59. (MIRA 12:8)

(Borshchov, Il'ia Grigor'evich, 1833-1878)

MASYUK, Nadezhda Prokhorovna; ZEROV, D.K., akademik, otv. red.: BRAHINS'KYI, L.P.
[Brahins'kyi, L.P.], red. izd-va; SIVACHENKO, Ye.K. [Sivachenko,
IE.K.], tekhn. red.

[Protococcales of the lakes of West Ukrainian Polesye] Protokokovi
vodorosti ozer zakhidnoukrains'koho Polissia. Kyiv, Vyd-vo Akad.
nauk URSR, 1958. 43 p. (MIRA 12:9)

1. AN USSR (for Zerov).
(Ukraine, Western--Algae)

VLASYUK, P.A., akademik; ZEROV, D.K., akademik; PSHENICHNYY, P.D., akademik;
 ROMANENKO, I.N., akademik, otvetstvennyy red.; MOVCHAN, V.A.;
 RODIONOV, S.P.; TYLENEV, N.A.; DAVYDOV, G.M., kand. ekon. nauk;
 KUGUKALO, I.A., kand. ekon. nauk; BEREZIKOV, V.S.; FEDUN, A.D.;
 GRUDZINSKAYA, O.S., red. izd-va; YURCHISHIN, V.I., tekhn. red.

[Natural conditions and resources of the Polesye; transactions of
 the Conference on Problems of the Development of the Productive
 Forces of the Ukrainian Polesye] Prirodnye uslovia i resursy
 Poles'ia; trudy konferentsii po voprosam razvitiia proizvoditel'-
 nykh sil Poles'ia USSR, Kiev, Pt.1. 1958. 123 p. (MIRA 11:7)

1. Akademiya nauk URSS, Kiev. Rada po vyvchenniu produktivnykh syl.
2. Akademiya nauk URSS (for Vlasjuk, Zerov).
3. Ukrainskaya akademiya sel'skokhozyaystvennykh nauk (for Vlasjuk, Pshenichnyy, Romanenko).
4. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I. Lenina (for Vlasjuk).
5. Chlen-korrespondent Vsesoyuznoy akademi' sel'skokhozyaystvennykh nauk imeni V.I. Lenina (for Romanenko).
6. Chlen-korrespondent akademii nauk URSS (for Movchan, Rodionov, Tyulenev).
7. Zamestitel' nachal'nika otдела svodnykh perspektivnykh planov Gosplana URSS (for Beresikov).
3. Nachal'nik podotдела sel'skogo khozyaystva otдела svodnykh perspektivnykh planov Gosplana URSS (Fedun).

(Polesye--Natural resources)

ZEROV, D.K.

ROMANENKO, I.N., akademik, otvetstvennyy red.; VLASYUK, P.A., akademik, red.;
ZEROV, D.K., akademik, red.; RODIONOV, S.P., red.; TYULENEV, H.A.,
 red.; PSHENICHNYI, P.D., akademik, red.; DAVYDOV, G.M., kand. ekon.
 nauk, red.; KUGUKALO, I.A., kand. ekon. nauk, red.; BEREZIKOV, V.S.,
 red.; FEDUN, A.D., red.; KOZAKEVICH, T.A., red. izd-va; SIVACHENKO,
 Ye. K., tekhn. red.

[Problems in the economy of Polesye; transactions of a conference]
 Voprosy ekonomiki Poles'ia; trudy konferentsii. Kiev, Izd-vo Akad.
 nauk USSR. Vol. 4. 1958. 134 p. (MIRA 11:10)

1. Konferentsiya po voprosam razvitiya proizvoditel'nykh sil
 Poles'ya USSR. 1955. 2. Akademiya nauk USSR (for Vlasyuk, Zerov,).
3. Ukrainskaya Akademiya sel'skokhozyaystvennykh nauk (for Vlasyuk,
 Romanenko, Pshenichnyy). 4. Vsesoyuznaya Akademiya sel'skokhozyay-
 stvennykh nauk im. V.I.Lenina (for Vlasyuk). 5. Chlen-korrespondent
 Vsesoyuznoy Akademii sel'skokhozyaystvennykh nauk im. V.I.Lenina
 (for Romanenko). 6. Chlen-korrespondent Akademii nauk USSR (for
 Rodionov, Tyulenev). 7. Zamestitel' nachal'nika otdela svodnykh
 perspektivnykh planov Gosplana Soveta Ministrov USSR (for Beresikov).
8. Nachal'nik podotdela sel'skogo khozyaystva i zagotovok otdela
 svodnykh perspektivnykh planov sel'skogo khozyaystva Gosplana
 Soveta Ministrov USSR (for Fedun),
 (Polesye--Economic conditions)

ZEROV, D.K.

^c
Crimean liverworts [with summary in English]. Ukr. bot. zhur. 15
no.1:78-87 '58. (MIRA 11:5)

1. Institut botaniki AN URSR, viddil sporovikh roslin.
(Crimea--Hepaticae)

ZEROV, D.K.; SHCHEKINA, N.O.

Ivan Fedorovich Shmal'gauzen; on the 60th anniversary of the publication of his "Floras of central and southern Russia, the Crimea, and Northern Caucasus". Ukr.bot.zhur. 14 no.4:92-99 '57.
(MIRA 11:1)

(Shmal'gauzen, Ivan Fedorovich, 1849-1894)
(Bibliography--Botany)

MODILEVSKIY, Ya.S.; ZEROV, Demetrius K., 1895-, red.

[Cytological embryology of the principal cereals] TSitoembriologiya
osnovnykh khlebnnykh zlakov. Kiev, Akademiia nauk Ukrainsoi SSR,
1958. 335 p. (MIRA 11:10)

(Botany--Embryology) (Grain)

ZEROV, K.K.

Old ox-bow lake beds of the Belaya and Ufa Rivers, their genesis
and overgrowth [with summary in English]. Trudy Inst.hidrobiol.
AN URSR no.21:107-118 '47. (MLRA 8:5)
(Belaya Valley) (Ufa Valley)

ZEROV, K. K.

Zerov, K. K. - "An investigation of the vegetation overgrowth of the Dnieper River in the middle of its course," (Based on data from the prognosis of overgrowth of the Central Dnieper reservoir) Trudy In-ta gidrobiologii (akad. nauk Ukr. SSR, No. 23, 1949, p. 36-54 (Kn Ukrainian, resume in Russian), - Bibliog: 34 items

SU: U-4934, 29 Oct 53, (Letopis 'Zhurnal 'nykh Statey, No. 16, 1949).

ZEROV, K.K.

Plant growth in water bodies along the lower Dnieper and possible changes in their vegetation in connection with the construction of the Kakhovka Reservoir. Trudy Inst.gidrobiol. AN URSR no.31 '59.
(MLRA 7:8)

(Dnieper River--Botany) (Botany--Dnieper River)
(Kakhovka Reservoir--Botany) (Botany--Kakhovka Reservoir)

ZEROVA

TOVBIN, M.V.; ALMAZOV, A.M.; FEL'DMAN, M.B.; MAYSTHENKO, Yu.G.; ROLL, Ya.V., redaktor; MOVCHAN, V.A., redaktor; VLADIMIROV, V.I., doktor biologicheskikh nauk, redaktor; KRYUKHIN, B.V., kandidat biologicheskikh nauk, redaktor; ALMAZOV, kandidat khimicheskikh nauk, redaktor; ZEROV, K.K., kandidat biologicheskikh nauk, redaktor.

[Hydrochemical characteristics of the lower reaches of the Dnieper and Ingulets Rivers and a prognosis of conditions of Kakhovka Reservoir] Gidrokhimicheskaya kharakteristika nizov'ev rek Dnepra i Ingul'tsa i prognos reshina Kakhovskogo vodokhranilishcha. Kiev, Izd-vo Akademii nauk Ukrainskoi SSR, 1954. 103 p. (Akademiia nauk USSR, Kiev. Instytut hidrobiologii, Trudy, no.30). (MLRA 9:5)

1. Chlen-korrespondent AN USSR (for Roll, Movchan)
(Dnieper River) (Ingulets River) (Kakhovka Reservoir)

ZEROV, K.K.

Shore and aquatic vegetation of the lower Dnieper. Trudy Inst.
gidrolbiol. AN URSR no.34:35-60 '58. (MIRA 12:3)
(Dnieper Valley--Botany)

ZEROV, K.K. .

Principal features of the formation of vegetation in the Kakhovka Reservoir during the three years of its existence. Ukr.bot.zhur.
17 no.1:3-11 '60. (MIRA 13:6)

1. Institut gidrobiologii AN USSR.
(Kakhovka Reservoir--Fresh-water flora)

YEMCHENKO, A.I. , otv. red.; TOPACHEVSKIY, O.V.

[Topachevs'kyi, O.V.], doktor biol. nauk, glav. red.;
ROLL, Ya.V., red.[deceased]; MOVCHAN, V.A., red.;
VLADIMIROV, V.I.[Vladymyrov, V.I.], doktor biol. nauk,
red.; VINOGRADOV, K.O.[Vynohradov, K.O.], doktor biol.
nauk, red.; TSEYEB, Ya.Ya., doktor biol. nauk, red.;
SAL'NIKOV, M.Ye [Sal'nykov, M.IE.], kand. biol. nauk,
red.; ALMAZOV, O.M., kand. khim. nauk, red.; ZEROV, K.K.,
kand. biol. nauk, red.

[Some problems of the physiology of digestion and
metabolism in fishes] Deiaki pytannia fiziologii tav-
lennia ta obminu rechovyn u ryb. Kyiv, Vyd-vo AN URSR,
1962. 115 p. (Its Pratsi) (MIRA 17:11)

1. Chlen-korrespondent AN Ukr.SSR (for Yemchenko, Roll,
Movchan).

BRAGINSKIY, L.P. [Brakins'kyi, L.P.]; ZEROV, K.K.; RADZIMOVSKIY, D.A.
[Radzymovs'kyi, D.O.]

IAkiv Volodymyrovych Roll (1887-1961). Ukr. bot. zhur. 19 no.2:88-94
'62. (MIRA 15:6)

(Roll, IAkiv Volodymyrovych, 1887-1961)

TOPACHEVSKIY, O.V.[Topachevs'kyi, O.V.], glav. red.; MOVCHAN, V.A., red.; ALMAZOV, O.M., doktor geogr. nauk, red.; VLADIMIROV, V.I.[Vladymyrov, V.I.], doktor biol. nauk, red.; VINOGRADOV, K.O.[Vynohradov, K.O.], doktor biol. nauk, red.; TSEYEB, Ya.Ya.[TSeeb, IA.IA.], doktor biol. nauk, red.; SAL'NIKOV, M.Ye.[Sal'nykov, M.IE.], kand. biol. nauk, red.; ZEROV, K.K., kand. biol. nauk, red.

[Desna River within the boundaries of the Ukraine; sanitary-hydrobiological and hydrochemical characteristics] Desna v mezhakh Ukrainy; sanitarno-hidrobiologichna ta hidrokhimichna kharakterystyka. Kyiv, Vyd-vo "Naukova dumka," 1964. 158 p.
(MIRA 17:7)

1. Akademiya nauk URSR. Kiev. Instytut hydrobiologii. 2. Chlen-korrespondent AN Ukr.SSR (for Topachevskiy). 3. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I.Lenina i chlen-korrespondent AN Ukr.SSR (for Movchan).

TSEYEB, Ya.Ya.; ROLL, Ya.V.[deceased]; ZEROV, K.K.; VLADIMIROVA, K.S.
[Vladymyrova, K.S.]; OLIVARI, G.A.[Olivari, H.A.]; GURVICH,
V.V.; BIRGER, T.I.[Birher, T.I.]; MALYAREVSKAYA, O.Ya.
[Maliarevs'ka, O.IA.]; CHORNOGORENKO, M.I.[Chernohorenko,
M.I.]; LITVINOVA, M.O.[Lytvynova, M.O.]; ANDRIYCHUK, M.D.,
red.

[Kakhovka Reservoir; a hydrobiological outline] Kakhovs'ke
vodoimyshe; hidrobiologichnyi narys. Kyiv, Naukova dumka,
1964. 303 p. (MIRA 17:8)

1. Akademiya nauk URSR, Kiev. Instytut hidrobiologii.

TOMASHEVICH, G.N.; ZERNOVA, A.E.

Chemistry and restoration. Priroda 52 no.6:104-106 '63.
(MERA 16:6)

1. Gosudarstvennaya tsentral'naya khudozhestvenno-restavratsionnaya
masterskaya, Moskva.

(Art objects--Conservation and restoration)

ZEROVA, M.D.

Studying the jointworm chalcids (genus Harmolita Motsch) and
chalcids parasitic pests of some gramineous plants of the
western provinces of the Ukraine. Visnyk. Kyiv. un. no.2.
Ser. biol. no.2:47-49'60. (MIRA 16:8)

(UKRAINE, WESTERN—CHALCID FLIES)
(UKRAINE, WESTERN—GRASSES—DISEASES AND PESTS)

ZEROVA, M.D.

Species of the genus *Tetramesa* Wlk. (Hymenoptera, Eurytomidae)
damaging *Stipa*, *Bromus*, *Zerna* in the Ukrainian S.S.R. Ent. oboz.
44 no.3:632-647 '65. (MIRA 18:9)

1. Institut zoologii AN UkrSSR, Kiyev.

ZEROVA, M.D.

A new species of eurytomid flies of the genus *Tetramesa* Wlk.
(Hymenoptera, Eurytomidae). Dop. AN URSR no.7:954-957 '65.
(MIRA 13:8)

1. Institut zoologii AN UkrSSR.

BELAVIN, Oleg Vasil'yevich, dots.; ZEROVA, Margarita Vladimirovna,
dots.; GANIN, I.K., red.

[Modern means of radio navigation] Sovremennye sredstva ra-
dionavigatsii. Moskva, Sovetskoe radio, 1965. 279 p.
(MIRA 18:10)

AUTHORS: Levin, G.A. and Zerova, M.V. Sov/106-58-2-1/16
TITLE: Tuning Error in a Pulse-signal Receiver Using a.f.c.
With a Diode-phantastron Control Circuit (Oshibka v
nastroyke priyemnika impul'snykh signalov pri primeneni
APCh s diodno-fantastronnoy skhemoy upravleniya)
PERIODICAL: 'Elektrosvyaz', 1958, Nr 2, pp 3 - 11 (USSR).

ABSTRACT: The input signal is mixed with a local oscillation whose frequency may be controlled by a voltage. The output of the mixer is fed via a tuned amplifier to a discriminator, the cross-over frequency of the discriminator and the centre frequency of the amplifier being the same. The voltage pulses out of the discriminator are amplified and fed to the diode-phantastron circuit. In the absence of discriminator output, the phantastron produces a saw-tooth voltage waveform, causing the local oscillator to "search" over the frequency scale. The grid of the phantastron is returned to earth via the diode, connected as a d.c. restorer. Discriminator pulses appearing across the diode produce a negative voltage which stops the search. The anode voltage of the phantastron is now dependent on the voltage at its grid and behaves like an ordinary "integrator". The following assumptions are made in

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Tuning Error in a Pulse-signal Receiver Using a.f.c. with a Diode-phantastron Control Circuit

the analysis of the circuit:- within the working limits, the discriminator characteristic, the control characteristic of the local oscillator and the anode-grid relation of the phantastron valve when used as an amplifier are all linear; the pulses are rectangular; distortion suffered in transit through the narrow-band and video amplifiers are neglected; the diode characteristic is piecewise linear. Since the relations in the rest of the loop are independent of time, interest is centred on the behaviour of the control circuit. Analysis of the circuit of Figure 4 yields equations (9) and (10) which describe the way in which the grid voltage of the phantastron varies in the interval between pulses. Eqs.(13), (14) and (15) give the deviation of local oscillator frequency from nominal value and the time-rate of change. Because of the periodic nature of the signal, the local oscillator frequency will also have a saw-tooth variation. The tuning error is defined as the peak deviation of local oscillator frequency from the cross-over point of the discriminator and is given by Eq.(20). This error will be the less, the higher the video gain and

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Tuning Error in a Pulse-signal Receiver Using a.f.c. with a Diode-phantastron Control Circuit

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discriminator slope, the greater the ratio of pulse-length to charge time of capacitor C_1 , the smaller the ratio of repetition period to discharge time of C_1 . When the tuning error is large, it is sometimes advisable to displace the crossover frequency of the discriminator away from the nominal amplifier band-centre.

There are 7 figures and 1 Soviet reference.

SUBMITTED: March 4, 1957

Card 3/3

1. Electronic equipment--Performance
2. Electric circuits--Analysis
3. Electron tubes--Control systems

ACC NR: AM6003233

Monograph

UR/

Belavin, Oleg Vasil'yevich; Zerova, Margarita Vladimirovna

Modern methods of radio navigation (Sovremennyye sredstva radionavigatsii) Moscow, Izd-vo "Sovetskoye radio", 65. 0279 p. illus.; biblio. Errata slip inserted. 9,300 copies printed.

TOPIC TAGS: spacecraft navigation equipment, radar tracking, radar system, doppler tracking, artificial satellite orbit, orbit parameter

PURPOSE AND COVERAGE: This book views the principles of operation of modern radar devices and systems and describes their basic characteristics. Special attention is given to radar systems designed to secure guidance of cosmic flight instruments. Methods are given for determining orbit parameters by measuring navigational dimensions with statistical determinations. Variants of schemes for units or radar devices are given as well as estimates of measurement precision. This book is recommended as a text for students of radio technology specialties in aviation institutes, and it can also be useful to engineers working with radar devices.

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Ch. I. Determining orbit parameters of artificial Earth satellites by measuring one navigational dimension—5

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UDC:621.396.981(075)

ACC NR: AM6003233

- Ch. II. Determining orbit parameters of artificial Earth satellites by measuring several navigational dimensions--27
- Ch. III. Radar tracking systems of artificial Earth satellites--39
- Ch. IV. Determining the position of the flying apparatus by signals from the artificial Earth satellite--87
- Ch. V. Doppler meters of the velocity vector--103
- Ch. VI. Radar astronavigation devices--171
- Ch. VII. Vertical-incidence radar--192
- Ch. VIII. Hyperbolic phase systems without signal modulation--207
- Ch. IX. Phase systems with signal modulations--241
- Suppl. to ch. 2: Estimates of the precision of measurement of orbit parameters by measuring three navigational dimensions--263
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SUB CODE: 17,22/SUEM DATE: 21Aug65/ ORIG REF: 052 OTH REF: 025

Card 2/2

ACC NR: AT6037046

SOURCE CODE: UR/0000/66/000/000/0078/0096

AUTHOR: Zerova, M. V. (Candidate of technical sciences, Docent)

ORG: none

TITLE: Transformation of the frequency spectrum when a pulse-phase modulated signal passes through a delay system and an amplifier which is switched by the input undelayed signal

SOURCE: Moscow. Aviatsionnyy institut. Teoriya i tekhnika radiolokatsii (Radar theory and techniques); sbornik statey, no. 1. Moscow, Izd-vo Mashinostroyeniye, 1966, 78-96

TOPIC TAGS: Doppler radar, pulse phase modulation, frequency conversion

ABSTRACT: The article considers the time structure and the frequency spectrum of a signal at the output of a device consisting of a delay circuit and an amplifier which is switched by the pulse-phase modulated input signal. It is assumed that the input signal consists of an infinite sequence of rectangular pulses of duration τ_p with a time position given by the expression

$$t_k = kT_0 + \Delta t_k;$$

$$\Delta t_k = \Delta T \sin \Omega kT_0;$$

where

$$\Omega = \frac{2\pi}{NT_0}$$

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ACC NR: AT6037046

is the wobble frequency. Expressions are derived which make it possible to find any component of the output signal frequency spectrum. The nature of this frequency spectrum is affected by the delay time of the input signal. As an example, the variation in the constant component and in the amplitude of the first, second and third harmonic wobble frequency as a function of the delay time, is considered. In this case only the intensity of the spectrum components varies when going from one period to another. Orig. art. has: 8 figures, 25 formulas.

SUB CODE: 17,09/ SUBM DATE: 15Jul66/ ORIG REF: 003/ OTH REF: 002

Card 2/2

SOV/106-59-3-5/12

AUTHOR: Zerova, M.V.

TITLE: The Capture Processes in an A.F.C. System with Diode-Phantastron Control Circuit in the Transition from a Search Regime to Automatic Tuning (Protsessy ustanovleniya v sisteme apch s diodno-fantastronnoy skhemoy upravleniya pri perekhode ot poiskovogo rezhima k avtopodstroyke)

PERIODICAL: Elektrosvyaz', 1959, Nr 3, pp 32-40 (USSR)

ABSTRACT: The circuit (Ref 1,2) can be described by the block diagram of Fig 1; a control circuit is shown in Fig 2 and waveforms in Fig 3. The present article is devoted to the transition from search to follow; it is assumed that during this time the signal remains at a fixed frequency. Eq 1 (from Ref 1) gives two expressions, the first is for the deviation of a local oscillator frequency from a steady-state value at the end of the N-th period, in terms of that at the beginning of a period; the second expression is an analogous one for the rate of change of the local oscillator frequency. Fig 4 shows diagrammatically the frequency deviation of a local oscillator during the search regime, it corresponds to

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Control Circuit in the Transition from a Search Regime to Automatic
Tuning

the amplitude of the pulse at the output of the amplifier equalling the voltage across the input condenser to the phantastron. The exact course of the transient response depends on the initial conditions, that is, the initial frequency deviation. Eq 5 is a general expression for the transient response, the exact form of the response depends on the relative values of a , a_{k1} , a_{k2} ; when $a \leq a_{k1}$ the response is always monotonic. When $a \approx a_{k1}$ the speed of working is greatest, for this condition the response is given in Fig 5 for various time constants. When $a \gg a_{k2}$, three other cases may arise: the signal may be captured after a damped oscillation, a continuous oscillation may develop, or the signal may be captured temporarily, then finally lost for good. When a lies between the values of the other two coefficients it is possible for the signal to be lost but there is very wide latitude in the choice of circuit time constants. The values of the

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a-coefficients are defined at the top of page 36. The
author thanks Professor G.A. Levin for valuable advice.
There are 8 figures and 2 Soviet references.

SUBMITTED: 31st January 1958

Card 3/3

SOV/106-58-11-3/12

AUTHOR: ~~Zerova, M.V.~~

TITLE: The Transient Process Caused by a Change in Signal Frequency in an AFC System with a Diode-Phantatron Control Circuit (Perekhodnyy protsess v sisteme AFCh s diodno-fantatronnoy skhemoy upravleniya, obuslovlennyy izmeneniyem chastoty signala).

PERIODICAL: Elektrosvyaz', 1958,¹² Nr.11, pp.18-28 (USSR)

ABSTRACT: The block diagram is shown in Fig.1 and the arrangement of diode and phantatron is given in Fig.2. The behaviour of this type of circuit is different for positive and negative control signals from the video amplifier, and in this article only the first type of change is considered as being the more interesting. The basis of the study is the results obtained in a previous article by the author (Ref.1) in which the diode characteristic was approximated by a stepwise-linear curve which enabled the connection to be established between system conditions at the end of the $n-1$ and n -th periods. The point of departure is the linear transformation (1). Here Δf_g is the deviation

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of frequency from its nominal value, $d\Delta f_g/dt$ is the rate of change of frequency and $a_{11} \dots a_{23}$ are constant coefficients dependent on the parameters of the a.f.c. system. This transformation may be succinctly expressed in terms of the matrix A . It also follows that the connection between the states of the system at the ends of the n -th period and initially is given by A^n . To determine this transformation it is convenient to transform coordinates. The elements of the converting matrix are found by solving the equation system (2). The basic equation of the a.f.c. system is given by (3), (4), (5) and (6) while the matrix elements are in (8). Eq.(12) describes the transient process in the circuit when there is a step-change in signal frequency, while (13) estimates the variation in rate of change of frequency during the process. The response is aperiodic when the roots of the characteristic equation θ_1 and θ_2 are positive and less than unity. If $\theta_1 \neq \theta_2$, then the number of periods required to reduce the initial detuning by a factor μ is given by the

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expression for n (near the foot of p.23). If $\theta_1 = \theta_2$ the corresponding formula is (16). This latter condition for the roots is only fulfilled if (17) for a is satisfied. Fig.3 shows the number of periods n for detuning correction as a function of a for various values of $e^{-\gamma}$ and $\mu = 10$. The greater the coefficient a , the more rapidly does the system approach the steady-state. The operating speed of the system is increased for an increase in system gain, the ratio T/RC_2 , the ratio t_u/T_3 and T_1/T . If the transient response is permitted to have an overshoot, two important cases may be distinguished. 1. When $a > 1$. The maximum frequency deviation occurring is (18). It is evident from Figs.4 and 5 that a considerable overshoot occurs, and in practice this leads to a reduction in operating speed. 2. $a_k < a < 1$. The equation for the transient process is (19), the maximum frequency deviation (21), the number of periods n to reduce detuning by a factor μ is in Fig.6. The magnitude of the overshoot increases with the initial

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frequency deviation, the system gain, the ratio T/RC_2 ,
the ratio t_u/T_3 and the ratio T_1/T . The author thanks
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7 figures and 1 Soviet reference.

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ZEROVA, N. Ya.; VORON'YEV, D. V.

"Ectotrophic Mycorrhiza on Species of Trees and Bushes in the Steppe Environment of the Ukrainian SSR," Botan Zhur, Kiev, 1950, Vol VII, Issue 1.

Mikrobiologiya, Vol XX, No. 5, 1951. W-24635.

ZEROVA, M. Ya.

"Scleroderma verrucosum (Waill.) Pers., One of the Mycorrhizal Fungi of Tree Varieties
in the Steppe Environment of the Ukrainian SSR," Botan Zhur, Kiev, 1951, Vol VII, No. 4

Mikrobiologiya, Vol XX, No. 5, 1951

~~W~~-W-24635.

1. ZEROVA, M.Ya., ROMASHKO, Ya.D.
2. USSR (600)
7. "Heart Rot as One of the Causes of Premature Fall of the Fruit of the Apple Tree", Botanichniy Zhurnal, Vol 7, No 3, 1950, pp 52-65.
9. Mikrobiologiya, Vol XXI, Issue 1, Moscow, Jan-Feb 1952, pp 121-132. Unclassified.

1. ZEROVA, M. YA.
2. USSR (600)
7. "Interesting Fungi, New to the USSR, on the Pontic Azalea (Asalea pontica L.)".
Botanichnyi Zhurnal AN USSR (Botanical Journal of the Acad Sci Ukrainian SSR),
Vol 8, No 2, 1951, pp 75-79.
9. Mikrobiologiya, Vol XXI, Issue 1, Moscow, Jan-Feb 1952, pp 121-132. Unclassified.

ZEROVA, M.Ya.

Fungus diseases of the smoke tree (*Cotinus coggygia* Mill.). Bot.zhnr. [Ukr.]
8 no.3:64-77 '51. (MLRA 6:9)
(Smoke tree--Diseases and pests)

ZEROVA, M.Ya.

Fungus diseases of species of the maple on the right bank of the Ukrainian
S.S.R. Bot.zhur.[Ukr.] 9 no.1:27-52 '52. (MLRA 6:11)

1. Institut botaniki Akademii nauk Ukrainy'koi RSR, Viddil mikologii.
(Ukraine--Maple--Diseases and pests) (Diseases and pests--Maple--
Ukraine) (Ukraine--Fungi, Pathogenic) (Fungi, Pathogenic--Ukraine)

ZEROVA, M.Ya.

Fungus diseases of the Siberian acacia and elms caused by species of *Nyctophanerella* in the Ukrainian S.S.R. Bot.zhur.[Ukr.] 9 no.3:55-65 '52.
(MIRA 6:11)

1. Instytut botaniky Akademiyi nauk Ukrayins'koyi RSR, Viddil mikologiyi.
(Ukraine--Fungi, Pathogenic) (Fungi, Pathogenic--Ukraine)
(Elm--Diseases and pests) (Acacia--Diseases and pests)

ZEROVA, M.Ya.

Fungus diseases of ash on the right bank region of the Ukrainian S.S.R.
Bot.zhur.[Ukr.] 10 no.1:23-36 '53. (MLRA 6:8)
(Ukraine--Ash (Tree)--Diseases and pests) (Diseases and pests--
Ash (Tree)--Ukraine)

ZEROVA, M.Ya.; YEFIMOVA, N.I.

Effect of mycorrhizal fungi found in oak groves of the steppes on the development of oak seedlings in a vegetative experiment. Bot.zhur. [Ukr.] 10 no.2:32-45 '53. (MLRA 6:6)

1. Instytut botaniky AN URSR. Viddil mikologiyi.
(Oak) (Mycorhiza)

ZEROVA, M.Ya.

New species of mycorrhizal fungi for the Ukrainian S.S.R., *Lactarius insulsus*
Fr. and *Tricholoma imbricatum* (Fr.) Qué. Bot.zhur. [Ukr.] 10 no.3:67-71 '53.
(MLBA 6:8)

1. Instytut botaniky Akademiyi nauk Ukrayins'koyi ESR, viddil mikolohiyi.
(Ukraine--Fungi) (Fungi--Ukraine)

ZEROVA, M. Ya.

Parasitic microflora of forest plantations of the right bank of the
Ukrainian S.S.R. Bot. zhur. [Ukr.] 10 no. 4: 66-74 '53. (MLBA 6:12)

1. Institut botaniki Akademii nauk Ukrain's'koi RSR, viddil mikologii.
(Ukraine--Parasitic plants) (Trees--Diseases and pests)

ZEROVA, M.Ya.

Occurrence of the mycorrhizal fungus *Scleroderma verrucosum* (Vaill.)
Pers and certain other species of gasteromycetes in the Ukrainian
S.S.R. Bot.zhur.[Ukr.] 11 no.2:63-74 '54. (MIRA 8:7)

1. Institut botaniki AN URSR, viddil mikologii.
(Ukraine--Gasteromycetes)

ZEROVA, M. Ya.

Rare fungus, *Calvatia candida* (Rostk.) Hollos., new to the
Ukraine S.S.R. Bot. zhur. [Ukr.] 12 no.1:78-82 '55.
(MIRA 8:9)

1. Institut botaniki AN URSR, viddil mikologii
(Ukraine--Fungi)